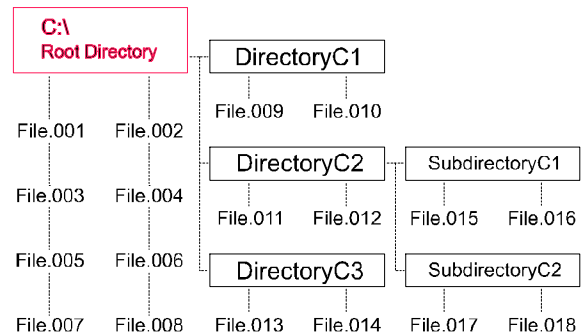## Directory Structure

FIGURE A-1

Read this only as a last resort. It is best to rely on your computer guru for help.

The root directory may contain numerous files and directories. In fact, the number of files is only limited by the disk space available to hold them. In turn, each directory may also contain additional files and directories.

A directory within a directory is known as a subdirectory. Each subdirectory may also contain files and directories provided there is enough disk space available. This structure can continue on indefinitely as long as there is room for storage (Figure A-1 is a visual representation using drive c: as an example). This holds true for hard drives and floppy drives alike.

> *Note:* MS DOS will not accept filenames or directory names longer than eight characters. The names used here are for the purpose of example only.

Path

The path specifies the location of a file within the directory tree. The path is the most critical aspect of MS DOS because it is used in almost every command. It can be thought of as the route taken from the root directory to get to the particular location.

Using Figure A-1 for an example, to get to files in the SubdirectoryC1 directory, you must go first through the following directories: root (\), DirectoryC2, and SubdirectoryC1. The full path of File.016 including the drive letter is designated in MS-DOS as "**c:\DirectoryC2\SubdirectoryC1\File.016**". The c: represents the drive; the first backslash represents the root directory; the second backslash is used to separate the directory SubdirectoryC1 from its parent directory DirectoryC2; and the third backslash is used to separate the file File.016 from the directory Subdirectoryc1.

The Prompt

Before learning any commands in DOS, you must first understand the prompt. This is the line of characters just before the cursor where you can enter commands. It contains information about the current drive and directory location (or 'path'). The

prompt typically starts with a drive letter followed by a colon (**:**) and a backslash (\)
and is ended with a greater-than sign (⋔. When you are in the root directory, that is
typically all that will be in the prompt. When you are in a directory within the root
directory, the prompt will start with the drive letter followed by a colon, a backslash,
and the directory name followed by a greater-than sign. When you are in a
subdirectory, the prompt starts with the drive letter followed by a colon, a backslash,
the directory name, and the subdirectory name followed by a greater-than sign. It is
quite possible to get a very long prompt if there are several directories along the path.
See examples below (they correspond to Figure A-1):

Location	Prompt
Root Directory	C:\⟩
DirectoryC2	C:\DirectoryC2⟩
SubdirectoryC1	C:\DirectoryC2\SubdirectoryC1⟩

Changing Drives

Changing drives is one of the simplest things to do in DOS. Typically the hard drive
lettering starts with C: and others will be labeled consecutively. The floppy drive will
be A:. If there are two, they will be A: and B:.

To change to a particular drive type the drive letter followed by a colon and press the
Enter key. To change to the C: drive, type "**c:**" <ENTER>. To change to the A:
drive, type "**a:**" <ENTER>. DOS commands are not case sensitive, so upper and
lowercase are treated equally.

Changing Directories

Changing directories can be a bit more complicated than changing drives. When
changing directories, the path must be taken into account except when changing to
the root directory. The command for changing directories is "**cd**" followed by the
path and pressing the Enter key. Whatever the current directory is "**cd**" <ENTER>
will always take you to the root directory.

Lets use Figure A-1 for some examples. If you are in SubdirectoryC2 and you want
to change to DirectoryC1, type "**cd\directoryc1**" <ENTER> (or you could type
"**cd..**" <ENTER> which will take you back one level). As a general rule, it is safest
to use the full path to get to the proper destination. To get to DirectoryC1, if you are
starting from another subdirectory under SubdirectoryC2 or even farther along the
path, type "**cd\directoryc1**" <ENTER>. If you are trying to move farther along the
path you must use the remaining portion of the path in the cd command. For
example, to change from the root directory to SubdirectoryC1, type "**cd
directoryc2\subdirectoryc1**" <ENTER>. If you are already in DirectoryC2 and are
trying to get to SubdirectoryC1, you could type "**cd subdirectoryc1**" <ENTER>.

Directory Command

In order to see a list of files and directories, use the "**dir**" command. Directories will
be displayed inside brackets (example: [SubdirectoryC1]). If you want see a list of
files and directories within the current directory, type "**dir**" <ENTER>. If you want
to see a list of files and directories under a directory other than the current directory,
type "**dir**" followed by a space (" ") and the path of the desired directory.

There are a couple of switches that are very useful with the "**dir**" command, especially when there is a large number of files and/or directories. These are "**/w**" for wide and "**/p**" for pause. The switch for wide will cause the list to be displayed using the entire screen instead of using only the left column. The pause switch will cause the list to stop scrolling at each screen full, requiring you to press a key for scrolling to continue. These switches are keyed without spaces, at the end of the path. As a general rule it is helpful to use both of these switches each time you use the "**dir**" command unless you know for sure the entire list can be displayed on one screen.

Lets use Figure A-1 for some examples. If you want to know what is in the current directory you can type "**dir/w/p**" <ENTER> (notice the use of 'wide' and 'pause'). If you are in the root directory and want to see a list of files and directories under SubdirectoryC1, type "**dir directoryc2\subdirectoryc1/w/p**" <ENTER>. If you do not wish to use the pause or wide option, just omit the switch(es) from the command. If you are in SubdirectoryC2 and you want to see a list of the root directory, type "**dir**" <ENTER> (or "**dir\/w/p**" <ENTER> using the switches). Again from SubdirectoryC2, lets say you want to see a list of files and directories under DirectoryC2, you could type "**dir\directoryc2/w/p**" <ENTER>. If you are in the a: drive, you could still get a list of the files under DirectoryC2 by typing "**dir c:\directoryc2**" <ENTER>.

Filenames

Each file has a name. Most files also have an extension. The name always appears first, and the extension is always separated from the name by a period. The name can be up to eight characters long and can be made up of letters A through Z (upper or lowercase), the numbers 0 through 9, and only some special characters may be used. Certain reserved filenames may not be used (refer to your MS DOS manual for more details).

Wildcards

In order to ease the process of working with files, you can use 'wildcards'. The asterisk (*****) can be used to represent a whole word or a group of characters. Wildcards can be used to specify a group of files. You could type "**dir *.com**" <ENTER> to view a list of all files with the '**.com**' extension within the current directory. You could type "**dir f*.com**" <ENTER> to view a list of all files beginning with the letter '**f**' and having the '**.com**' extension within the current directory. You could type "**dir f*.***" <ENTER> to view a list of all files beginning with the letter '**f**' within the current directory. You could type "**dir *.**" to view a list of directories only within the current directory.

FIGURE A-2
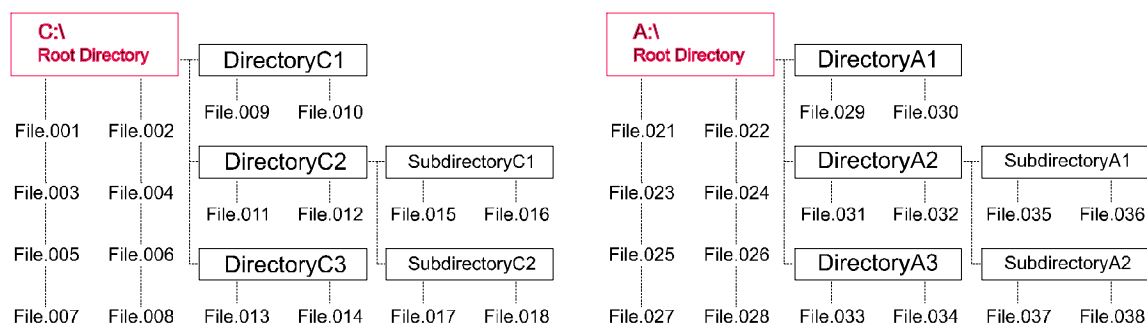
Make Directory Command

To make a directory within the current directory, you must type "**md**" followed by a space and the directory name you wish to create. If you wish to create a directory anywhere outside the current directory, you must provide the full path. Using Figure A-2 for an example, if you are currently in the root directory of drive A: and want to create SubdirectoryC3 within DirectoryC2 on the C: drive, type "**md c:\directoryc2\subdirectoryc3**" <ENTER> (specifying the full path). If you are currently in the root directory of drive C: and want to create DirectoryC4 within the root directory type "**md DirectoryC4**" <ENTER>. When creating directories, if you want upper or lower case in the directory name, you must type the name the way you want it to appear.

> *Note:* MS DOS will not accept filenames or directory names longer than eight characters. The names used here are for the purpose of example only. Also note that spaces and certain other characters will not be accepted either.

Remove Directory Command

In order to remove a directory, it must be empty (deleting files will be covered later). It cannot contain any files or directories. The exception to this rule are the two directories, [.] and [..], that are automatically created by DOS in every directory other than the root directory. Once the directory to be deleted is empty, use the "**rd**" command. The "**rd**" command uses the same format as the "**md**" command. You must also specify the path when removing a directory. Using Figure A-2 for an example, if you are currently in the root directory of drive A: and want to delete SubdirectoryC2 from DirectoryC2 on the C: drive, you must first empty the contents of SubdirectoryC2, then type "**rd c:\directoryc2\subdirectoryc2**" <ENTER>. If you are currently in the root directory of drive C: and want to delete the directory DirectoryC3 from within the root directory, after emptying DirectoryC3 of all its contents, type "**rd directoryc3**" <ENTER>.

Copy Command

To copy files from one directory to another or one drive to another, use the "**copy**" command. The best way to copy files is to use the full path names, type "**copy**" followed by a space, then the full path of the copy-from directory and filename, then a space and the full path of the copy-to directory, then press <ENTER>. The easiest way is to first change directories so that the destination directory is current. Lets use

Figure A-2 for some examples. If you wanted to copy File.038 from SubdirectoryA2 to SubdirectoryC2, type "**copy a:\directorya2\subdirectorya2\ file.038 c: \directoryc2\subdirectoryc2**" <ENTER>. This copy command would have the same effect, no matter what directory you're in. Using the easier method, you would first want to change to SubdirectoryC2 as the current directory (see Changing Directories earlier in this Appendix), then you would type "**copy a:\directorya2\subdirectorya2\file.038**". Notice the copy-to path was not needed in the command since the destination is the current directory.

To copy all files from one directory to another or one drive to another, you can use wildcards (see Wildcards earlier in this Appendix). Using Figure A-2 for an example, to copy all files from DirectoryA3 to SubdirectoryC1, you would type "**copy a:\directorya3*.* c:\directoryc2\subdirectoryc1**" <ENTER>. In the previous example, if the destination is the current directory you would only need to type "**copy a:\directorya3*.***" <ENTER>.

Delete Command

To delete files, use the "**del**" command. The path is also critical when deleting files. You must specify where the files are located in order to delete them. If you want to delete a file from the current directory, type "**del**" followed by the filename and press <ENTER>. Using Figure A-2 for an example, if you are currently in the root directory of drive C: and want to delete File.018 from SubdirectoryC2, type "**del directoryc2\subdirectoryc2\file.018**" <ENTER>. Wildcards can also be used with this command. If you want to delete all files from DirectoryA2 and you are currently in the DirectoryA2 directory, type "**del *.***" <ENTER>.

Be very careful when deleting files. Once they're gone, they're gone for good.